MODERN TOPICS IN IT – IT4020

Group ID: **MTIT-099**

Assignment 02 - Augmented Reality

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DECLARATION

We declare that this is my own work, and this proposal does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other university or Institute of higher learning and to the best of our knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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K.T. Neranga	IT18256888
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G.P.S. Dhananjaya	IT18231588
W.M.P.B. Hulugala	IT19199290

1 INDIVIDUAL CONTRIBUTION

Student ID	Student Name	Individual Contributions
IT18256888	K.T. Neranga	○ Make a simple augmented reality application. ○ Make an own marking. ○ For the own artifact, get the source and texture files. ○ Using the augmented reality idea, display 3D artifacts. ○ Create a one-of-a-kind application and report.
IT18227246	G.K.L. Deshapriya	○ Make a simple augmented reality application. ○ Make an own marking. ○ For the own artifact, get the source and texture files. ○ Using the augmented reality idea, display 3D artifacts. ○ Create a one-of-a-kind application and report.
IT18231588	G.P.S. Dhananjaya	○ Make a simple augmented reality application. ○ Make an own marking. ○ For the own artifact, get the source and texture files. ○ Using the augmented reality idea, display 3D artifacts. ○ Create a one-of-a-kind application and report.
IT19199290	W.M.P.B. Hulugala	○ Make a simple augmented reality application. ○ Make an own marking. ○ For the own artifact, get the source and texture files. ○ Using the augmented reality idea, display 3D artifacts. ○ Create a one-of-a-kind application and report.

2 SCREEN SHOTS OF INDIVIDUAL APPLICATIONS

2.1 IT18256888

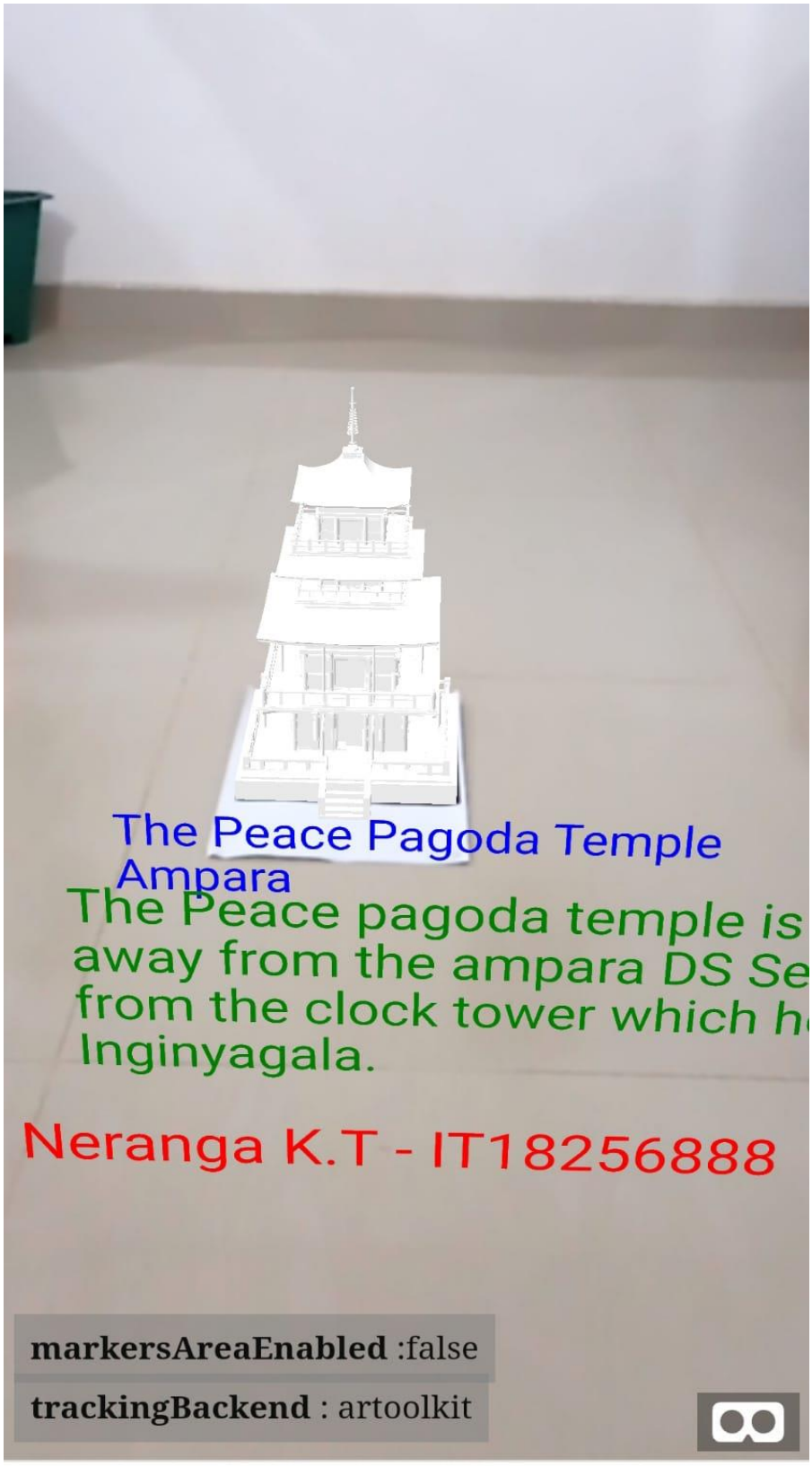

Figure 2.1: 3D Landscape

2.2 IT18227246

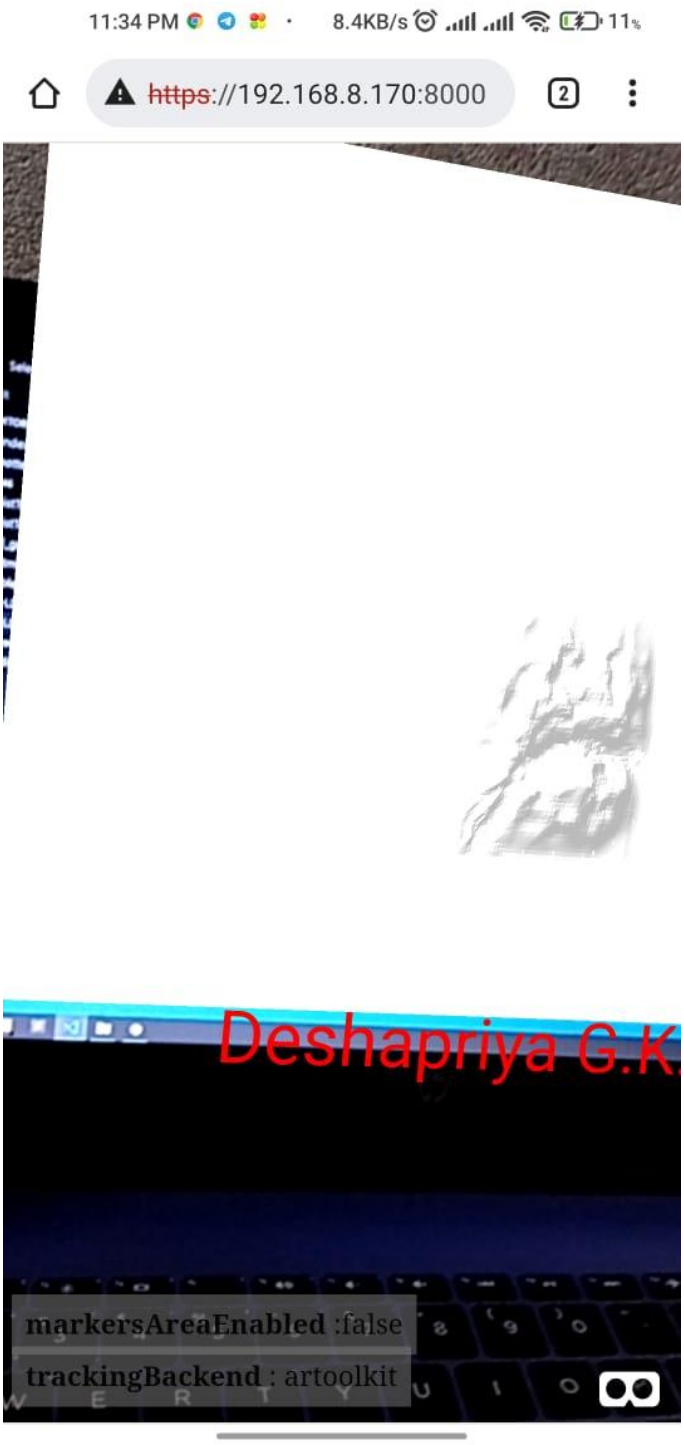

Figure 2.2: 3D Landscape

2.3 IT18231588

Figure 2.3: 3D Landscape

2.4 IT19199290

Figure 2.4: 3D Landscape

3 SCREEN SHOTS OF THE FINAL APPLICATION

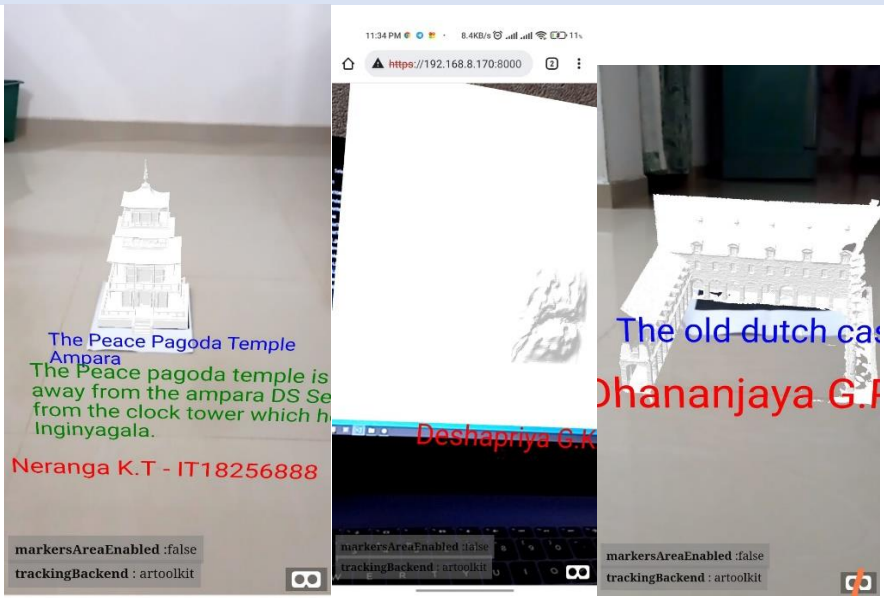

Figure 3.1: Final 3D output

4 SOURCE CODE OF THE APPLICATION

4.1 IT18256888

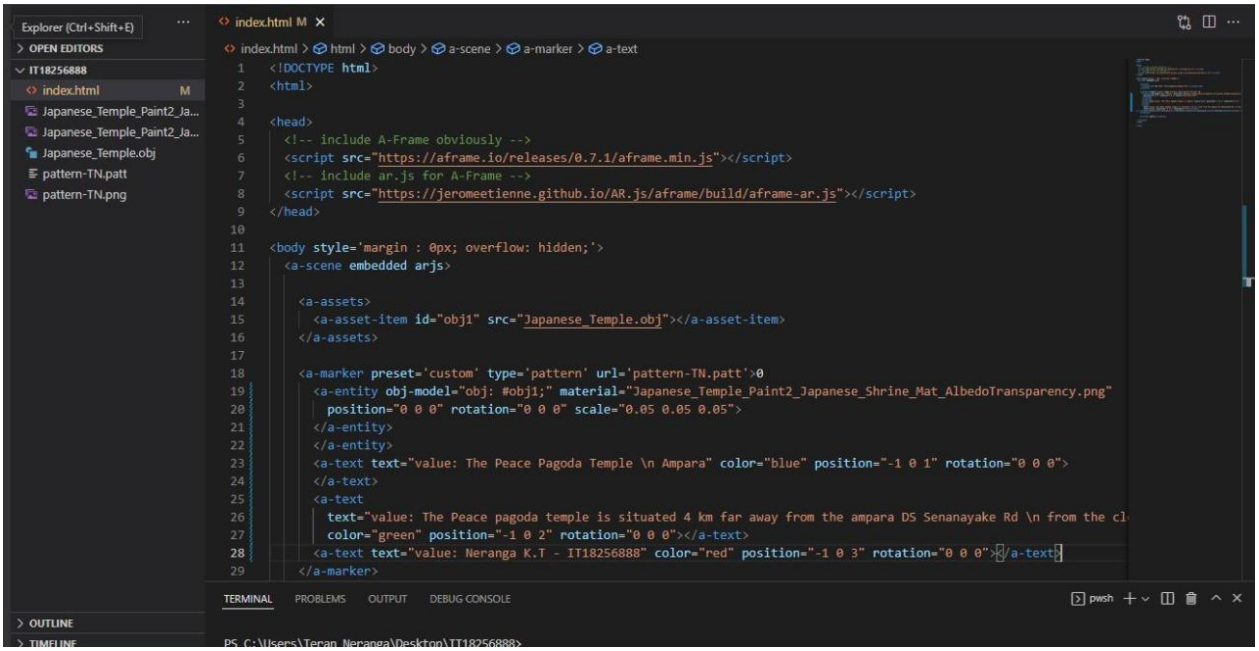

Figure 4.1: Source code

4.2 IT18227246

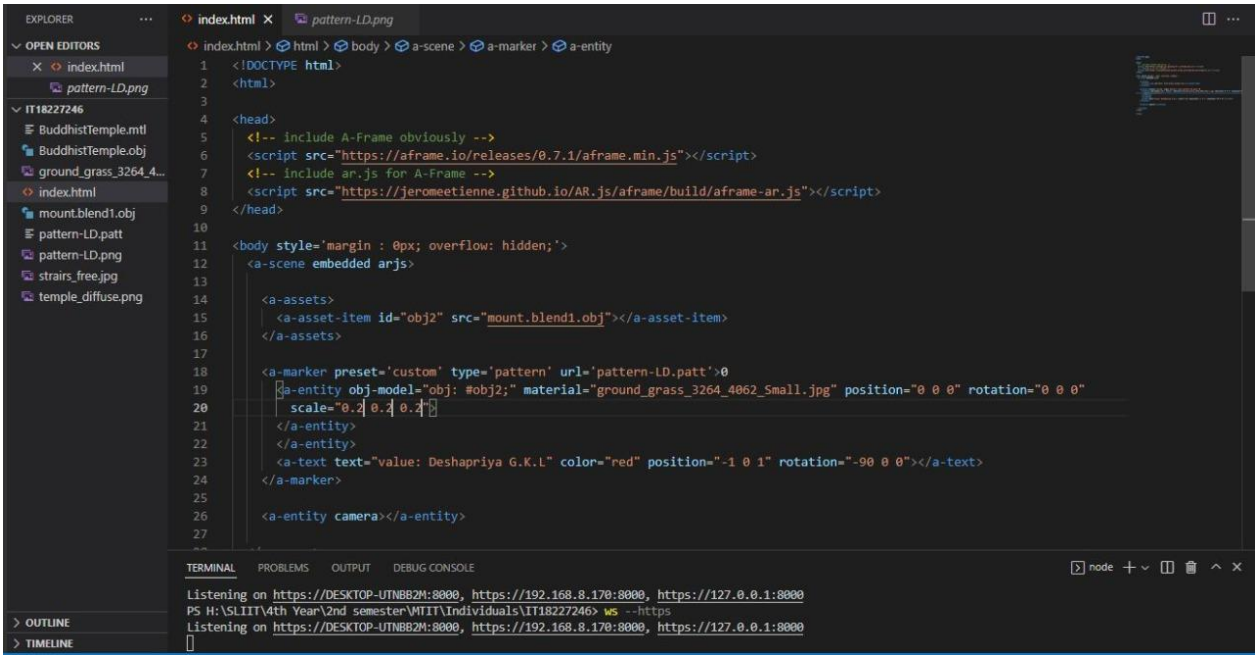

Figure 4.2: Source code

4.3 IT18231588

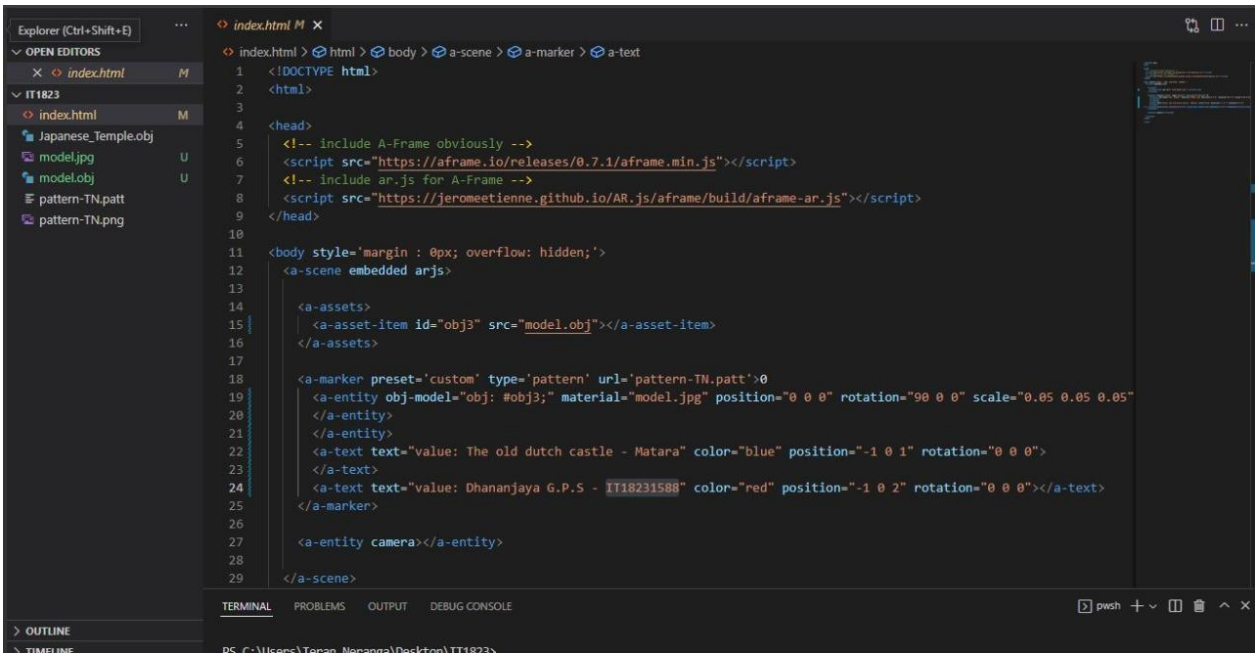

Figure 4.3: Source code

4.4 IT19199290

index.html

G: > MTIT > index.html > ...

```
<!DOCTYPE html>
<html>

<head>
  <!-- include A-Frame obviously -->
  <script src="https://aframe.io/releases/0.7.1/aframe.min.js"></script>
  <!-- include ar.js for A-Frame -->
  <script src="https://jeromeetienne.github.io/AR.js/aframe/build/aframe-ar.js"></script>
</head>

<body style='margin : 0px; overflow: hidden;'>
  <a-scene embedded arjs>

    <a-assets>
      <a-asset-item id="obj4" src="cottage_obj"></a-asset-item>
    </a-assets>

    <a-marker preset='custom' type='pattern' url='pattern-PRASA.patt'>0
      <a-entity obj-model="obj: #obj4;" material="abandoned-cottage-house.png" position="0 0 0" rotation="0 0 0" scale="0.05 0.05 0.05">
      </a-entity> </a-entity>
      <a-text text="value: The Peace Pagoda Temple \n Ampara" color="green"  position="-1 0 1"  rotation="-90 0 0"></a-text>
      <a-text text="value: The cottage is situated 10 km far away from the Hambanthota Yala Rd \n from the Hanbanthota town ." color="red"  position="-1 0 2"  rotation="-
      <a-text text="value: Prasadika W.M" color="brown"  position="-1 0 3"  rotation="-90 0 0"></a-text>
    </a-marker>

    <a-entity camera></a-entity>

  </a-scene>
</body>

</html>
```

Figure 4.4: Source code

4.5 Overall Source Code

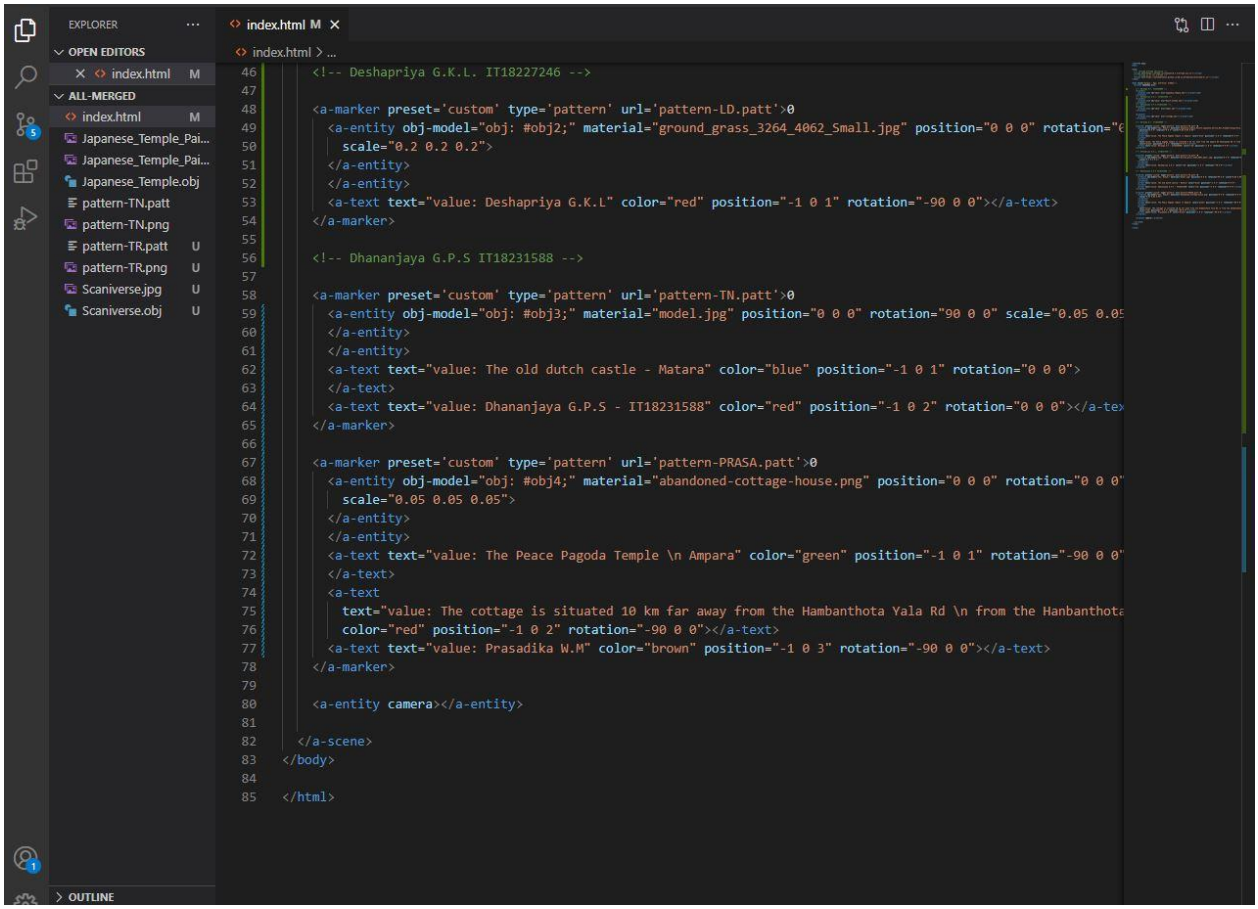

Figure 4.5: Source code

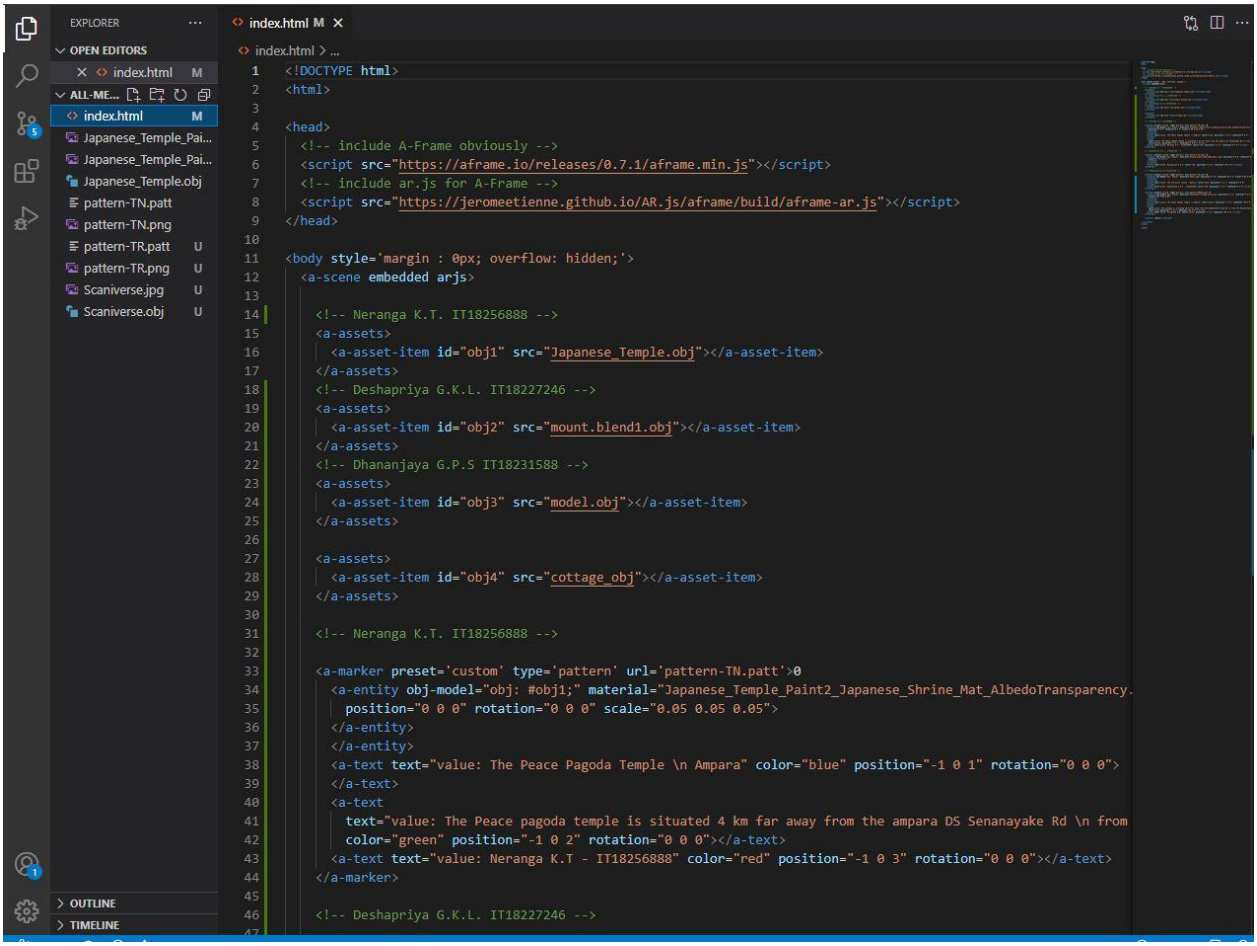

Figure 4.6: Source code

5 WRITEUP OF A REAL-LIFE PROBLEM

At the moment, Augmented Reality is used in a variety of settings. The home-buying process is one of the most common uses of augmented reality in our daily lives. Prospective homebuyers can frequently examine a house from the comfort of their desktop computer or mobile device by using a "virtual tours" option before making the trip to see the home in person. These clients can also use apps like Houzz and DecorMatters to envision how they would decorate one of their future homes. Amazon, ever the game changer, is looking for ways to reduce the number of clothing returns it receives from customers while also making purchasing easier via a "virtual changing room" app. This augmented reality feature would scan your physical dimensions, analyze additional data about your preferences, and recommend a size or style to you. It will even be able to generate how the apparel would look on you using a presentation layer. As a result, the clothing fit is expected to be much more precise, resulting in a more accurate depiction of the outfit and a more informed purchase decision.